Technical Advisory Council (TAC) Meeting

17 October 2023



Meeting information

- → Meeting to begin at 5:00 pm Central European Time
- → Join the meeting by going to https://zoom-lfx.platform.linuxfoundation.org/meeting/95214651568?pass word=eda16f17-bdd1-4a9f-a594-0947a1433153
- → Any problems with connectivity, you can contact John Mertic from the Linux Foundation at +1 234-738-4571
- → Previous TAC Meeting notes, deck, and recording, at https://wiki.lfenergy.org/display/HOME/Technical+Advisory+Council#TechnicalAdvisoryCouncil-MeetingMinutes



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Agenda

All Times in Central European Time Zone

- 5:00 pm 5:10 pm Opening and General Updates
 - TAC member updates and project review date reminders
 - General updates
- 5:10 pm 5:20 pm Project Security Focus
 - OpenSSF badge status review
 - LFX Security
 - Early adoption level project security audits
- 5:20 pm 5:40 pm Open Sustainable Technology Proposal
- 5:40 pm 6:00 pm Grid Capacity Map Annual Review
- 6:00 pm 6:20 pm OpenEEMeter Annual Review
- 6:20 pm 6:25 pm Marketing/PR/Events updates
- 6:25 pm 6:30 pm Closing and Next Meeting



Opening and General Updates

5:00 pm - 5:10 pm



TAC Voting Members

You can update your headshot/title at openprofile.dev.



Antonello Monti Chair **Professor**





Anne Tilloy Project manager RTE (Reseau de **Transport** dElectricite)

Bryce Bartmann

Chief Digital

Shell International

Petroleum Company



Art Pope Member of Technical Staff at Google LLC



Avi Allison Program Manager, Energy, Sustainability Microsoft

Corporation







Jonas van den **Bogaard** Technology Advisor Open Source Office Lead Alliander





Transport dElectricite)



Travis Sikes Senior Data Scientist Recurve



	GXF	Maarten Mulder, Alliander
	SOGNO	Antonello Monti, RWTH Aachen University
IFFnorgallocted	CoMPAS	Aliou Diaite, RTE & Sander Jansen, Alliander (TAC Representative)
LF Energy Hosted	FledgePOWER	Akli Rahmoun, RTE
	Hyphae	Asimenia Korompili, RWTH Aachen University
Project and Working	openLEADR	Lonneke Driessen & Stan Janssen, OpenADR
	SEAPATH	Éloi Bail, RTE
Group Leads	Grid Capacity Map	Per Lysemose Hansen, Energinet
Group Leaus	Shapeshifter	Robben Riksen, Alliander
	OpenSTEF	Frank Kreuwel, Alliander
Characra in hald	EVerest	Marco Möller, PIONIX
Changes in bold	OpenGEH	Per Lysemose Hansen, Energinet
	FlexMeasures	Nicolas Höning, Seita Energy Flexibility B.V.
	Arras	David Chassin, SLAC
	Dynawo	Marco Chiaramello, Benoît Jeanson, RTE
	OpenFIDO	David Chassin, SLAC
	Power Grid Model	Tony Xiang, Alliander
	Real Time Data Ingestion Platform (RTDIP)	Bryce Bartmann, Shell
	TROLIE	Christopher Atkins, MISO Energy
	Battery Data Alliance	Gabe Hege, AMPLabs
JLFENERGY	GRIP (Grid Resilience and Intelligence Platform)	Alyona Teybar, MASc

Project PowSyBI

OperatorFabric

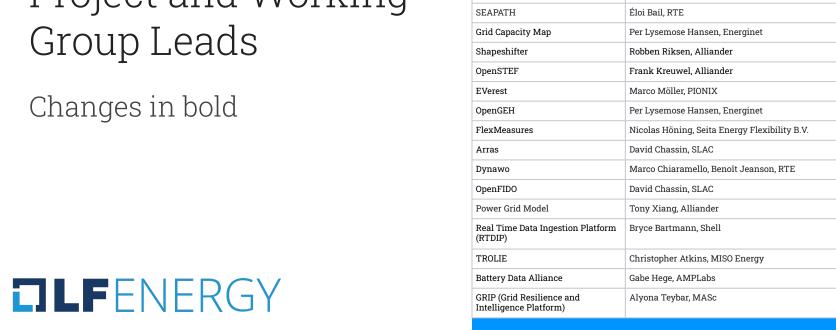
OpenEEmeter

Project Lead(s)

Frederic DIDIER, RTE

Travis Sikes, Recurve

Anne Tilloy, RTE



Project Review Cycle

Early Adoption

EVerest

2023 Upcoming Reviews				
Project	Current Level	Initially Accepted	Last Review	Next Review
Grid Capacity Map	Incubation	April 27, 2021	July 12, 2022	October 17, 2023
OpenEEmeter	Incubation	June 4, 2019	September 13, 2022	October 17, 2023
OpenCEH	Sandbox	October 12, 2021	October 4, 2022	October 17, 2023
OpenSTEF	Incubation	September 21, 2021	October 25, 2022	November 7, 2023
OpenLEADR	Incubation	September 15, 2020	December 6, 2022	November 7, 2023
FlexMeasures	Incubation	November 2, 2021	November 15, 2022	November 28, 2023
RTDIP	Sandbox	October 25, 2022		November 28, 2023
PowSyBI	Early Adoption	April 30, 2019	November 15, 2022	November 28, 2023
Dynawo	Sandbox	December 6, 2022		December 5, 2023

October 12, 2021

December 6, 2022

December 19, 2023

		Initially		
Project	Current Level	Accepted	Last Review	Next Review
OpenFIDO	Sandbox	January 17, 2023		January 9, 2024
SEAPATH	Incubation	October 6, 2020	January 17, 2023	January 9, 2024
Hyphae	Incubation	December 8, 2020	February 7, 2023	February 20, 2024
Power Grid Model	Sandbox	February 7, 2023		February 20, 2024
FledgePOWER	Incubation	February 11, 2021	March 21, 2023	March 12, 2024
SOGNO	Early Adoption	October 27, 2020	March 21, 2023	March 12, 2024
Shapeshifter	Incubation	April 6, 2021	April 11, 2023	April 23, 2024
Compas	Incubation	May 5, 2020	July 13, 2022	June 25, 2024
Arras	Sandbox	July 12, 2022	July 25, 2023	January 30, 2024
OperatorFabric	Early Adoption	April 30, 2019	July 25, 2023	July 16, 2024
TROLIE	Sandbox	September 5, 2023		September 3, 2024
Battery Data Alliance	Sandbox	September 5, 2023		September 3, 2024
GRIP (Grid Resilience and Intelligence Platform)	Sandbox	September 26, 2023		September 17, 2024
GXF	Early Adoption	February 4, 2020	September 26, 2023	September 24, 2024

2024 Euturo Poviowe

Working Groups				
Group	Current Level	Initially Accepted	Last Review	Next Review
Archimate Working Group	Active	October 4, 2022		11/28/2023

TAC Sponsors for Projects

As part of the benefit for LF Energy projects, the TAC has a sponsor for each project.

"Appointment of an existing TAC member by the TAC that will act as a sponsor of the project and provide recommendations regarding governance best practices."

ACTION: Review assignments, let John or Yarille know if there are issues



Project	Current Level	TAC Sponsor
Archimate Working Group	Working Group	Maarten Mulder
Arras	Sandbox	Antonello Monti
Battery Data Alliance	Sandbox	
CoMPAS	Incubation	Bryce Bartmann
Dynawo	Incubation	Art Pope
EVerest	Early Adoption	Bryce Bartmann
FledgePOWER	Incubation	
FlexMeasures	Incubation	Maarten Mulder
Grid Capacity Map	Incubation	Boris Dolley
GRIP (Grid Resilience and Intelligence Platform)	Sandbox	
GXF	Early Adoption	Jonas van den Bogaard
Hyphae	Incubation	Antonello Monti
OpenEEmeter	Incubation	Travis Sikes
OpenFIDO	Sandbox	Avi Allison
OpenGEH	Sandbox	Avi Allison
OpenLEADR	Incubation	Anne Tilloy
OpenSTEF	Incubation	Jonas van den Bogaard
OperatorFabric	Early Adoption	Boris Dolley
PowSyBl	Early Adoption	Anne Tilloy
Power Grid Model	Sandbox	Jonas van den Bogaard
Real Time Data Ingestion Platform (RTDIP)	Sandbox	Art Pope
SEAPATH	Early Adoption	
Shapeshifter	Incubation	Jonas van den Bogaard
SOGNO	Early Adoption	Antonello Monti
TROLIE	Sandbox	

General Updates

- We'd like to schedule guest speakers/topics that would be of interest to TAC members and TSC leads.
 - ACTION: Let us know what would be of interest at https://github.com/lf-energy/tac/issues/31.
- Plan to move all projects to using LFX PCC Meeting Management by end of the year; current status at https://github.com/lf-energy/tac/issues/39
 - ACTION: Volunteer to transition over.
- Future of Slack; revisit looking at alternatives. Zulip has been suggested at https://github.com/lf-energy/tac/issues/48
 - DISCUSSION: Revisit Slack and alternatives.



Project Security Focus

5:10 pm - 5:20 pm



Focuses

- Ensure all projects up to date with OpenSSF Best Practices Badge per their maturity level
- Clean up LFX Security to ensure it's accurate
- Promote SBOM scanning
- Security Audits for all 'Early Adoption' stage projects
- Security strategy developed by TAC (response standards, CVE response)





openssf best practices silver















































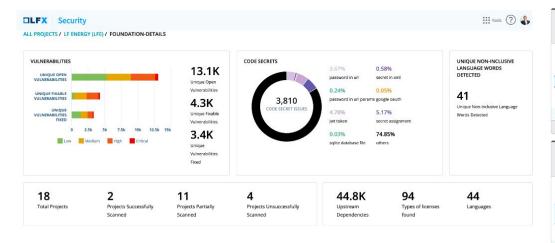






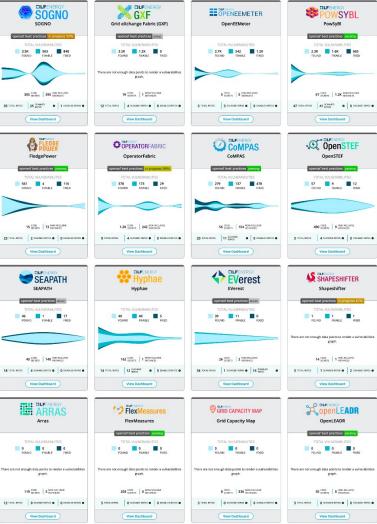
Current OpenSSF Best Practices Badge status

ACTION: Projects in red boxes need review (source https://tac.lfenergy.org/projects_with_bestpractices)



- 16 of 20 projects on LFX Security
- 6 projects with no successful scans
- Only 2 projects with a full scan

ACTION: Project leads to review LFX Security and resolve issues/disable repos that shouldn't be scanned.



18 projects having license scans and SBOMs being generated.

GOAL: All project scanned every quarter

	Carbon-Data-Spec	add SPDX file for Carbon-Data-Spec from 2023-07 Fossology scan	2 months ago
	EVerest	add SPDX file for EVerest from 2023-07 Fossology scan	2 months ago
	FledgePOWER	add SPDX file for FledgePOWER from 2023-07 Fossology scan	2 months ago
	GridCapacityMap	add SPDX file for GridCapacityMap from 2023-07 Fossology scan	2 months ago
	OCPPCloudConnector	add SPDX file for OCPPCloudConnector from 2022-12 Fossology scan	8 months ago
	OpenGEH	add SPDX file for OpenGEH from 2023-07 Fossology scan	2 months ago
	OpenSTEF	add SPDX file for OpenSTEF from 2023-07 Fossology scan	2 months ago
	RTDIP	add SPDX file for RTDIP from 2023-07 Fossology scan	2 months ago
	Shapeshifter	add SPDX file for Shapeshifter from 2023-07 Fossology scan	2 months ago
	compas	add SPDX file for compas from 2023-07 Fossology scan	2 months ago
	em2	add SPDX file for em2 from 2022-07 Fossology scan	last year
	flexmeasures	add SPDX file for flexmeasures from 2023-07 Fossology scan	2 months ago
1	gxf	add SPDX file for gxf from 2023-07 Fossology scan	2 months ago
	hyphae	add SPDX file for hyphae from 2023-07 Fossology scan	2 months ago
	openeemeter	add SPDX file for openeemeter from 2023-07 Fossology scan	2 months ago
	openleadr	add SPDX file for openleadr from 2023-07 Fossology scan	2 months ago
	operatorfabric	add SPDX file for operatorfabric from 2023-07 Fossology scan	2 months ago
	powsybl	add SPDX file for powsybl from 2023-07 Fossology scan	2 months ago
	riaps	add SPDX file for riaps from 2023-07 Fossology scan	2 months ago
	seapath	add SPDX file for seapath from 2023-07 Fossology scan	2 months ago
	sogno	add SPDX file for sogno from 2023-07 Fossology scan	2 months ago

Security Audits through Open Source Technology Improvement Fund.

Priority Focus for 'Early Adoption' projects

In progress:

- EVerest
- SEAPATH

TODO:

- GXF
- OperatorFabric
- PowSyBL
- SOGNO

Next focus is on Incubation projects.

ACTION: Remaining 'Early Adoption' projects get lined up for scans; identify any 'Incubation' projects next.



The Open Source Technology Improvement Fund is a corporate non-profit dedicated to **securing open source apps** that we all depend on. Securing software isn't easy, and we know what it takes to succeed. By facilitating security audits and reviews, OSTIF makes it easy for projects to significantly improve security.

Security Strategy

TAC take the lead on developing a common set of security expectations and infrastructure for all hosted projects.

Besides the aforementioned topics, the TAC should provide guidance on:

- Base security policy for projects
- Standards for security response and responsible disclosure (CVE)
- Anything else industry specific to consider

ACTION: TAC to discuss forming a group to focus on building out security strategy



Open Sustainable Technology Proposal

5:20 pm - 5:40 pm



Grid Capacity Map Annual Review

5:40 pm - 6:00 pm



OpenEEMeter Annual Review

6:00 pm - 6:20 pm





TAC Annual Review OpenEEmeter

OPENEEMETER Status

The current activity of the project, including releases, adoption, and committer/contribution growth and diversity.

- Releases:
 - 3.1.1 (minor error change), 3.2.0 (international changes, versioning updates)
 - 4.0.0a2 (daily model update)
- Most contributions from Recurve, 3 outside contributors (WattCarbon, Carbon Co-op)
- 2 successful working group initiatives (1 complete, 1 on-going)
 - Significant daily model improvements leading to 4.0.0a2, final version pending.
 - Daily model efficiency increase by 2 300x
 - Now can make unique models based on season and/or weekday/weekend
 - Considerable changes to hourly model in ongoing working group
 - Working group attendees peaked at ~50, regularly 20. Great ideas/feedback



Current Activity

OPENEEMETER Status

The current activity of the project, including releases, adoption, and committer/contribution growth and diversity.

- While methods/EEmeter has been improving:
 - Scale of use of the method + code base grown across U.S. utilities; and companies reliant on calculations for performance payment. Examples:
 - New California policy (Market Access program) launched \$150M in activity 2022-2023
 - New U.S. Federal policy (Inflation Reduction Act) calls for open-source measurement and verification for home performance incentive program
 - Code for complementary applications for comparison groups and demand response are accelerating (but have not yet been formally included in the project)

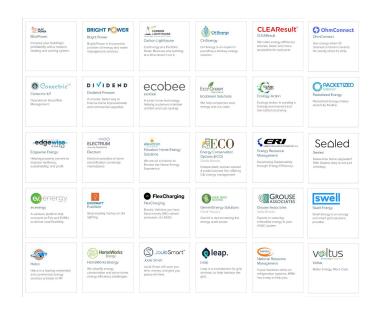


OPENEEMETER is the foundation for Demand Flexibility Performance Transactions

Utility Demand Flexibility Buyers



Demand Flexibility Providers



Requirements - Early Adoption

OPENEEMETER Status

Assessment of whether the project is fulfilling the requirements for the project to remain at its current stage [incubation], or be considered for a different stage

- Demonstrate growth in the project's community, including
 - Growth in the number of commits to the project, number of project committers, and organizational diversity of contributions and committers (29 unique comitters, 3 + organizations). ✓
 - Production or planned production use of the project by at least two independent end users which, in the TAC's judgment, are of adequate quality and scope.
- Technical Governance of the project is operational, as measured by:
 - A Technical Steering Committee with at least 5 members and a chairperson elected by the members, holding regular open meetings. [Next EEmeter TAC meeting item]
 - Achievement of the OpenSSF Best Practice badge at the 'Silver' Level [-]



Requirements - Early Adoption



Assessment of whether the project is fulfilling the requirements for the project to remain at its current stage [incubation], or be considered for a different stage

- Development of a growth plan, to be done in conjunction with their project mentor(s) at the TAC. This plan should address the following points: [-]
 - Since these metrics can vary significantly depending on the type, scope, and size of a project, the TAC has final judgment over the level of activity that is adequate to meet these criteria.
 - Release plans for the next 18 months.
 - Target end-users.
 - Identification of any regulatory or standards body requirements for deployment, and plans for implementation.
 - Plans for growth of project contributors and committers to support the growth plan.
 - Identification of any infrastructure resources needed to fulfill the growth plan.
- Presentation to the TAC of the project's growth, technical governance, and growth plan.
- Receive the affirmative majority vote of the TAC and Governing Board [-]





Feedback on its experience as an LF Energy project, including benefits from being an LF Energy project and areas that the TAC and LFE staff can better support the project.

- Experience as an LF Energy project has been positive.
 - Support in explaining open-source and it's value to our industry
 - Provides reference point of "acceptance" for the market
 - Provides access point for the industry from a trusted source
 - Policy positioning for open-source transparency
- Key Benefits are both for the project but also for the company
 - Branding
 - Nudging
 - Community with other projects
- TAC / LFE Staff can support with considering transition, and promoting new model
 - OpenEEmeter standing alone just doesn't do much
 - Still have scattered governance for multiple open-source methods and code
 - Bringing it under a single umbrella will help but still questions about how methods and code can best cohabitate in an LFE project



Marketing/PR/Events Updates

6:20 pm - 6:25 pm



Marketing and PR Updates

dbrown@linuxfoundation.org +1 415-420-7880

- Grants
 - EU Horizon grant application submitted last week topic is P2P energy sharing tool. LFE is part of a consortium led by Anto which will build the tool if the grant is awarded.
 - Submitted application for Ford Foundation grant topic is a research paper on open source AI for energy
 - Tentatively approved for Natural Resources Canada grant to produce a report on what Canadian utilities need to do to meet the goals of the energy transition - currently going through due diligence
- Cybersecurity for energy systems white paper draft has been completed and reviewed by LF Energy and OpenSSF SMEs; currently going through final edits before moving to design. Anticipate releasing this next month.
- Linux Foundation annual report Submitted content prominently highlighting LF Energy
- Developing Seeed ReCharger case study and webinar with EVerest project (jointly with LF Zephyr project which is also used in the product)
- Developing plan for engagement with standards bodies (IEC, IEEE, etc.)
- Recent media coverage
 - Smart Energy International Linux Foundation introduces significant software releases
 - o TFIR Without Energy, You Don't Have Technology | Dan Brown LF Energy
- Use this <u>form</u> to submit any comms/marketing support requests



Events

Recent Events

- OpenUK Open Source for Sustainability Day 14 Sept, Edinburgh
 - o Dan spoke about the three recent research reports
- LF Europe Member Summit 18 Sept, Bilbao
 - o LF Energy hosted a table at the event multiple new member prospects were generated
 - Lucian presented plenary session on LF Energy momentum
- SustainabilityCon at Open Source Summit Europe 19-21 Sept, Bilbao
 - Hosted four sessions:
 - Panel: How Open Source Collaboration is Transforming the Power Systems Sector
 - Session: More Renewable Energy Into the Power Grid with Open Source
 - Session: SEAPATH: A LF Energy Project for Critical Infrastructure with an Emphasis on Software Supply Chain Security
 - Panel: Advancing the United Nations Sustainable Development Goals through Open Source
 - Generated multiple new member prospects

Upcoming Events

- LF Energy Summit 2024
 - Developed preliminary budget
 - Finalizing details of date and location
 - \circ Aim to release a sponsor prospectus by mid-November
- FOSDEM 2024 3-4 Feb, Brussels
 - o Energy devroom proposal has been submitted
 - Also plan to partner with LF Europe on an application to host a stand at the event
- <u>Event tracker</u> please review and add any additional opportunities



Upcoming Event CFPs

- Enlit Europe Nov 28-30 Rolling submission deadline
- e-world Energy & Water Feb 20-22, 2024 Rolling submission deadline
- FOSS Backstage Berlin March 4-5, 2024 Submission deadline Nov 15
- Carbon Tracking & Reporting March 26-27, 2024 Rolling submission deadline
- Energy Thought Summit April 15-18, 2024 Rolling submission deadline
- CIRED Vienna June 19-20, 2024 Submissions open Sept 11, close Dec 8
- <u>MOVE London June 19-20, 2024 Rolling submission deadline</u> (for this one, we should email <u>cormac.martin@terrapinn.com</u> with speaking proposals)
- <u>IEEE PES General Meeting Seattle July 21-25, 2024 Submission due Nov 8</u>



Training Course

Introduction to Open Source for Energy Stakeholders

- Online, self-paced course
- No cost to enroll
- Will pull from existing LF Training courses around open source introduction and best practices
- Need to build additional content specific to energy and LFE projects
- Require a primary SME to lead content development suggestions?
- Volunteer committee can also assist, but a primary is required



Closing and Next Meeting

6:25 pm - 6:30 pm



Next TAC Meeting

The next meeting of the LF Energy TAC is scheduled for 7 November 2023 at 8:00 am US Pacific Time/11:00 am US Eastern Time/5:00 pm Central European Time. Agenda will include:

- Annual Review OpenLEADR #24
- Annual Review OpenSTEF #25
- General Updates
- Marketing/PR/Events update

To add agenda items, go to https://github.com/lf-energy/tac/issues/new/choose. You can review the TAC Agenda at https://github.com/orgs/lf-energy/projects/2/views/1



JLFENERGY